

## Short communication

# Records of two new ant genera, *Anonychomyrma* Donisthorpe and *Probolomyrmex* Mayr (Hymenoptera: Formicidae), for the Northern Territory

ALAN N. ANDERSEN

Division of Sustainable Ecosystems  
CSIRO Tropical Ecosystems Research Centre  
PMB 44, Darwin NT 0822, AUSTRALIA  
Alan.Andersen@csiro.au

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Andersen (2000) lists 66 ant genera recorded from the monsoonal tropics of northern Australia, out of the 103 total Australian genera (Shattuck 1999). Of the 66 monsoonal genera, six (*Colobostruma* Wheeler, *Dolichoderus* Lund, *Mesostruma* Brown, *Leptomyrma* Mayr, *Mayriella* Forel, and *Notoncus* Emery) are known from the region only in Queensland, *Willowsiella* Wheeler is known only from Western Australia, and *Amblyopone* Erichson occurs in both Queensland and Western Australia, but remains unrecorded in the Northern Territory. This leaves 58 genera listed from monsoonal Northern Territory (NT), one of which (*Anoplolepis* Santschi) is introduced (Young *et al.* 2001). This represents virtually all known NT ant genera; the only exception is *Adlerzia* Forel, an undescribed species of which has been collected from the Alice Springs region (D. Agosti, personal communication).

Two additional genera, *Anonychomyrma* Donisthorpe (Dolichoderinae) and *Probolomyrmex* Mayr (Poncrinae) have since been collected from the Top End of the NT, and these records are documented here.

### *Anonychomyrma* Donisthorpe, 1947

This genus comprises 30 described species and subspecies, distributed from southern Australia to Malaysia (Shattuck 1992a,b, 1999). The 14 species and subspecies listed from Australia are restricted to higher rainfall regions of the eastern and southern coasts (Shattuck 1999). Three Australian species groups can be recognised (Andersen 1991; these groups were then considered part of *Iridomyrmex*): the *itinerans* group, from subhumid regions of the south-east and south-west; the *nitidiceps* group, widely distributed but most common in southern dry sclerophyll forests and heathlands; and the *biconvexa* group, restricted to wetter forests of the eastern seaboard. The species are highly aggressive and behaviourally dominant members of ant communities where they occur (Andersen 1986).

Three specimens of a species of *Anonychomyrma* were recorded in pitfall traps during a fauna survey of Melville Island conducted by the Biodiversity Unit of the Northern Territory Department of Infrastructure, Planning and Environment during July and August 2001. The specimens were from two locations, "Three Ways" (11°44' S, 130°59' E) and "West Jump-up" (11°35' S, 130°33' E). In both cases the habitat was eucalypt woodland/open-forest with perennial tussock grasses on sandy loam soil.

The species-level taxonomy of *Anonychomyrma* is too poorly resolved to be confident of the identity of the Melville Island species. It is a member of the *nitidiceps* species group, with erect hairs present on antennal scapes, but largely absent from the gaster. The specimens are housed at the CSIRO Tropical Ecosystems Research Centre in Darwin.

### *Probolomyrmex* Mayr, 1901

This extremely rare ponerine genus is distributed throughout the world's tropics, and consists of 13 described species (Bolton 1995), most known only from one or a few records (Taylor 1965). They are small (total length 1.5–2 mm), typically blind ants that nest and forage within soil and litter.

A single species, *P. greavesi* Taylor, has been recorded from Australia. It is one of Australia's rarest ants, previously known only from a handful of records from the eastern seaboard, from Canberra to north Queensland (Shattuck 1999). However, in March 2002 it was collected from leaf litter during an ant survey by CSIRO at Solar Village (12°37' S, 131°06' E), 35 km south-east of Darwin. The vegetation of the collecting site was open forest dominated by *Eucalyptus miniata* and *E. tetradonta*. Solar Village had been protected from fire for more than 20 years, such that compared with surrounding (frequently burnt) savanna, tree cover was higher, litter was much denser, and grasses were virtually absent (Woinarski *et al.* in press).

Twenty-two specimens (all workers) of *P. greavesi* were collected from a single 30x30 cm litter sample. This is a greater number of individuals than all previous Australian records of the genus combined (S.O. Shattuck, personal communication). Specimens are housed in the Australian National Insect Collection in Canberra, the CSIRO Tropical Ecosystems Research Centre and the Museum and Art Gallery of the Northern Territory in Darwin (NTM 11179; 2 specimens).

## DISCUSSION

Many ant taxa are easily overlooked because of their cryptic habits and association with localised habitats. In addition to being rare, a number of NT ant genera are either rainforest specialists (e.g. *Mystrium* Roger, *Turneria* Forel, *Pseudolasius* Emery; Reichel and Andersen 1996) or occur in a broader range of forest habitats but are highly cryptic (e.g. *Leptanilla* Emery, *Machomyrma* Forel, *Rhopalomastix* Forel). *Probolomyrmex* can be placed in the latter category, so it is not surprising that it has hitherto been unrecorded in the Northern Territory. However, the occurrence on Melville Island of a species of *Anonychomyrma* is surprising, given it is a highly active, epigaeic species of savanna woodland, and therefore not so easily overlooked.

The nearest known record of *Anonychomyrma* in Australia is from coastal north Queensland. It has not been recorded from north Queensland west of the Great Dividing Range, or from the coastal plains of the Darwin region, despite extensive collecting. The species might also occur in Arnhem Land, most of which has been poorly collected for ants, or possibly even in South-east Asia. The possibility of it being introduced to Melville Island also cannot be ruled out, although this would seem unlikely given that its two known locations are remote from human settlement. There is therefore a strong likelihood that the Melville Island species is endemic there. Both its records on Melville Island lie within the general area of a proposed major acacia plantation, which raises concerns over its conservation status.

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